

Career Self-Efficacy and Perceptions of Parent Support in Adolescent Career Development

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The authors examined the relative contributions of both proximal and distal supports to the career interests and vocational self-efficacy in a multiethnic sample ($N = 139$) of middle school adolescents. Consistent with Social Cognitive Career Theory, it was found that (a) vocational self-efficacy and career planning/exploration efficacy consistently predicted young adolescents' career interests across Holland (J. L. Holland, D. R. Whitney, N. S. Cole, & J. M. Richards, 1969) themes; (b) gender and career gender-typing predicted interests in Realistic, Investigative, and Social careers; and (c) perceived parent support accounted for 29% to 43% of the total unique variance in vocational self-efficacy for all Holland theme careers.

The role of parents and the role of professional school counselors go hand in hand in the career development of young adolescents. School guidance programs have an underlying purpose to assist students in making informed education and career decisions and to provide the resources and materials to ensure that this process unfolds in a systematic and comprehensive manner (Kosteck-Bunch, 2000). Guidance and counseling are integral parts of each school's total educational program, which is designed to support, facilitate, and encourage classroom instruction and student achievement. The National Career Development Guidelines (Kobylarz, 1996), established in consultation with leading career development experts, recommended that professional school counselors attempt to establish student competencies around several broad areas that include career planning and occupational exploration. Middle school students who develop competency in career planning and exploration gain confidence in such career development tasks as understanding the relationship between learning and work, understanding how to gain the information necessary to seek and obtain various jobs, and understanding the process of career planning (Lapan, Gysbers, Multon, & Pike, 1997; O'Brien, Dukstein, Jackson, Tomlinson, & Kamatuka, 1999).

The role of parental influence and support outside the school setting has also been hypothesized to have a significant, positive impact on a child's career development process. Astin (1984) stated that parents act as "value socializers," shaping their children's perceptions of the appropriateness of occupational-related decisions. Eccles (1994) theorized that parents are "ex-

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pectancy socializers" who greatly influence their children's self-perceptions of being academically and vocationally competent. Young (1994) described parents as the primary providers of encouragement for their adolescents to reach vocational goals through both the modeling of career-related, goal-directed behavior and by actively providing career-related learning experiences.

Research has demonstrated some of the positive effects of parent support on adolescent and young adult career development. For example, rural adolescents' perceptions of parent support for pursuing occupations that represent certain Holland (Holland, Whitney, Cole, & Richards, 1969) themes was a significant predictor of their interests in, vocational self-efficacy for, and valuing of these occupations (Lapan, Hinkelman, Adams, & Turner, 1999). Perceived support from fathers was found to be related to the education plans and career expectations of Mexican American high school girls (McWhirter, Hackett, & Bandalos, 1998). Parental encouragement was found to have significant direct effects on learning experiences (grades in mathematics and science), efficacy, and outcome expectancies among undergraduate college students (Ferry, Fouad, & Smith, 2000). These various correlates of the career development of adolescents have been modeled in a newer theory of career development, social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994, 2000).

SCCT (Lent et al., 1994, 2000) provides a model for understanding how the perceived support of parents and the confidence gained through student participation in comprehensive guidance programs interact to support the career development of adolescents. According to this theory, proximal factors (e.g., race, gender, disability/health status, ethnicity) directly predict career interests and the career choice process of young persons by either providing or limiting access to vocational preparation and employment opportunities. Distal factors (e.g., the environmental supports provided by parents, teachers, and professional school counselors) exert a moderating effect through learning experiences on the young person's career-related self-efficacy and outcome expectations, which then mediate the formation of interests, career-related intentions, and career-related goals. Gender and the gender-typing of careers are related to career interest patterns (Lapan, Adams, Turner, & Hinkelman, 2000); career self-efficacy (the confidence to perform career specific tasks) and career planning/exploration efficacy are related to and predictive of the range of occupations considered (O'Brien et al., 1999; Rotberg, Brown, & Ware, 1987), the level of occupational interests (Bores-Rangel, Church, Szendre, & Reeves, 1990; Church, Teresa, Rosebrook, & Szendre, 1992), and the confidence to pursue career-related tasks (Ahrens & O'Brien, 1996) among adolescents and young adults.

Purpose of the Study

The literature suggests that in order to participate in a more intentional and self-directed way in their own career development process, young adolescents need both the support of their parents and involvement in a comprehensive school-based guidance program that develops confidence around such career-related competencies as career planning and occupational exploration. To date, however, little attention has been given to examining the combined effects of career self-efficacy, career planning/exploration efficacy, and perceptions of parent support on the career interests of middle school adolescents. We used a SCCT framework to examine the relative indirect contribution of perceived parent support (a distal environmental factor) to career self-efficacy as a mediator of career interests; the relative

direct contributions of two proximal factors (gender and the gender-typing of careers) to middle school adolescents' career interests; the relative direct contributions of career self-efficacy and career planning/exploration efficacy to the career interests of middle school adolescents; and, as a test of SCCT theory, the relative direct contribution of the distal environmental factor, perceived parent support, to the career interests of young adolescents. Specifically, we hypothesized that (a) the proximal supports of gender and career gender-typing, as well as career self-efficacy and career planning/exploration efficacy would significantly and differentially predict middle school adolescents' career interests across Holland (Holland et al., 1969) themes; (b) perceived parent support would significantly and differentially predict middle school adolescents' career self-efficacy across Holland themes; and (c) perceived parent support would directly predict middle school adolescents' career interests across Holland themes.

Participants

Participants were 139 seventh- and eighth-grade students who were distributed approximately equally between the two grades (79 boys, mean age = 12.62 years, $SD = .71$ years; 60 girls, mean age = 12.55 years, $SD = .72$ years). Eighty-four of the students were Caucasian Americans, 21 were African Americans, 18 were foreign nationals, 12 were Asian Americans, 3 were Hispanic Americans, and 2 were Native Americans. The foreign national students were first-generation Americans from Asia, Africa, and the Middle East who were born outside the United States. The participants were from a midsized midwestern community. All participants attended one of two middle schools that offered comprehensive guidance, including career planning and exploration activities, to all students throughout the school year. Both schools were in middle-class neighborhoods. Participants were recruited by one teacher from each school by asking for volunteers from each teacher's career development classes.

Measures

Mapping vocational challenges. Occupational interests, career self-efficacy expectations (the confidence to perform career specific tasks), perceived parent support for pursuing particular occupations, and career gender-typing were measured using Mapping Vocational Challenges (MVC; Lapan & Turner, 1997). The MVC is a computerized self-report assessment instrument that consists of the titles of 90 occupations, 15 for each Holland (Holland et al., 1969) occupational theme (Realistic [trades], Investigative [mathematics and science], Artistic, Enterprising [person-oriented business professions], Social [helping professions], and Conventional [data-oriented business professions]). These 90 occupations were presented sequentially to the participants. As each of the occupations was presented, the participants rated their interest level on a 3-point Likert-type scale (1 = *low interest*, 3 = *high interest*); their efficacy expectations on a dichotomous scale (0 = *I do not have confidence I could do this type of job*, 1 = *I have confidence I could do this type of job*); their perceived gender-typing of the occupation on a 5-point Likert-type scale (0 = *mostly men*, 4 = *mostly women*); and their perceptions of parent support on a dichotomous scale (0 = *My parents would not support me in pursuing this occupation*, 1 = *My parents would support me in pursuing this occupation*).

For each Holland (Holland et al., 1969) theme category, we constructed four variables by taking the mean scale scores for each participant. These variables were interest level in the occupations in that Holland category (e.g., Realistic Interest), career self-efficacy (confidence to perform career-related tasks) for the

occupations in that category (e.g., Realistic Career Efficacy), the gender-typing of the careers in that category (e.g., Realistic Gender-Typing), and the level of perceived parent support for careers in that category (e.g., Realistic Parent Support). These variables, which are reported in Table 1, were constructed by taking the mean of the 15 ratings for each scale item within each of the Holland occupational categories.

For the career interests scales, internal consistency estimates ranged from .70 to .77 for girls, .70 to .77 for boys, and .70 to .76 for the total sample. For the career self-efficacy scales, internal consistency estimates ranged from .79 to .84 for girls, .77 to .85 for boys, and .78 to .84 for the total sample. For the perceived parent support scales, internal consistency estimates ranged from .82 to .91 for boys, .83 to .87 for girls, and .82 to .89 for the total sample. Reliabilities for the gender-typing scales were not calculated because of the lack of variability among the participants' ratings.

TABLE 1

Means and Standard Deviations for Dependent and Independent Variables for Each Holland Occupational Category

Variable	R		I		A		S		E		C	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Interests												
Boys	1.77	0.32	1.90	0.37	1.80	0.32	1.54	0.31	1.58	0.34	1.53	0.29
Girls	1.59	0.31	1.67	0.35	1.93	0.35	1.74	0.33	1.62	0.35	1.58	0.36
Total	1.69	0.33	1.80	0.38	1.86	0.34	1.62	0.34	1.60	0.34	1.55	0.31
Career Self-Efficacy												
Boys	0.26	0.26	0.30	0.25	0.31	0.24	0.19	0.22	0.21	0.25	0.20	0.26
Girls	0.19	0.20	0.25	0.22	0.36	0.25	0.32	0.22	0.24	0.23	0.22	0.24
Total	0.24	0.24	0.28	0.24	0.33	0.24	0.25	0.23	0.22	0.24	0.21	0.25
Occupational Gender-Typing												
Boys	1.54	0.28	1.59	0.33	1.88	0.29	2.19	0.26	1.95	0.32	2.05	0.26
Girls	1.50	0.29	1.62	0.27	2.01	0.23	2.18	0.30	2.03	0.32	2.06	0.30
Total	1.52	0.28	1.60	0.30	1.93	0.27	2.18	0.27	1.98	0.32	2.05	0.28
Perceived Parent Support												
Boys	0.29	0.28	0.35	0.31	0.35	0.33	0.25	0.29	0.24	0.31	0.23	0.31
Girls	0.23	0.24	0.32	0.26	0.38	0.26	0.35	0.26	0.24	0.27	0.25	0.26
Total	0.26	0.26	0.34	0.29	0.35	0.26	0.29	0.28	0.24	0.29	0.24	0.29
Career Planning and Exploration Efficacy												
Boys	5.71	0.69										
Girls	5.85	0.69										
Total	5.77	0.69										

Note. R = Realistic; I = Investigative; A = Artistic; S = Social; E = Enterprising; C = Conventional. *df* = 138; *n* = 79 boys; *n* = 60 girls. Scores on the Interest Scale range from 1 to 3, with higher scores indicating higher interest. Scores on the Career Self-Efficacy Scale range from 0 to 1, with 0 = *no efficacy* and 1 = *efficacy*. Scores on Occupational Gender-Typing Scale range from 0 to 4, with higher scores indicating more women and lower scores indicating more men. Scores on the Perceived Parent Support Scale range from 0 to 1, with 0 = *no perception of parental support* and 1 = *perception of parental support*. Scores on the Career Planning and Exploration Efficacy Scale range from 1 to 7, with higher scores indicating greater efficacy.

Career Planning and Exploration Efficacy Scale. Career planning and occupational exploration efficacy was measured using the Career Planning and Exploration Efficacy Scale (CPEE) from the Missouri Comprehensive Guidance Survey (MCGS; Gysbers, Multon, Lapan, & Lukin, 1992). The CPEE is a 10-item measure of confidence for successfully engaging in one's own exploration and planning for suitable or potentially congruent careers. Sample items from this scale are "I know how to explore careers in which I may be interested," and "I understand how to prepare for careers in which I may be interested." The CPEE is scored on a 7-point Likert-type scale (1 = *low confidence*, 7 = *high confidence*). Higher scores indicate greater confidence. As reported in Table 1, one variable was constructed for the CPEE by taking the mean of participants' ratings for all scale items. Internal consistency estimates for the CPEE were .73 for boys, .82 for girls, and .76 for the total sample.

Procedure

During the fall semester of the school year, participants engaged in a variety of career planning and exploration activities, such as exploring labor market access, work activities, working conditions, educational requirements, salary levels, and occupational outlooks for specific careers. The participants completed two separate career interest inventories and participated in a 1-day job shadowing activity at a local business or factory. During the first 2 weeks of the following spring semester, the participants completed the MVC and the CPEE scale of the MCGS. These instruments were completed in classroom settings in which there were approximately 20 to 25 students. The testing was done in a series of five steps. First, participants viewed an online tutorial and received 10 minutes of pretest verbal instruction and practice in computerized test taking. Second, demographic information (age, gender, place of residence, ethnicity) was collected from participants. Next, participants completed the MVC career assessment instrument, which took approximately 25 to 30 minutes. Participants then completed the MCGS, which took approximately 15 minutes. Finally, participants were offered the opportunity to discuss their experiences with the assessment process and what they learned about themselves. One adolescent with an identified reading problem received teacher assistance in completing the MVC and the CPEE Scale, but his results were excluded from the subsequent statistical analyses.

Results

Hypothesis 1 stated that gender, career gender-typing, career self-efficacy, and career planning/exploration efficacy would significantly and differentially predict middle school adolescents' career interests across Holland (Holland et al., 1969) themes. To test this hypothesis, six multiple regression analyses were conducted, one for each Holland theme, with the interest level for occupations categorized by each Holland theme as the dependent variables. Gender, the gender-typing of careers in that category, career self-efficacy for the careers in that category, and career planning/exploration efficacy were the independent variables. Table 2 reports the correlation matrix of the variables for each equation.

Hypothesis 1 was partially supported. As shown in Table 3, four variables together significantly predicted interests in Realistic, Investigative, and Social occupations, with each adding significant unique variance to the prediction equation. Gender, career gender-typing, career self-efficacy, and career planning/exploration efficacy accounted for 25% of the total variance in Real-

TABLE 2

**Correlations of Dependent Variables and Independent Variables
From Each Holland Occupational Category**

Variable/Interest	Int	Gender	GenTyp	VocEff	Par	CPEE
Realistic						
Int	—	-.27**	-.21*	.25**	.01	-.27**
Gender		—	-.07	-.15	-.03	.10
GenTyp			—	.03	.16*	.08
VocEff				—	.68*	.18*
Par					—	.07
Investigative						
Int	—	-.28**	-.18*	.36***	.05	-.24**
Gender		—	.04	-.11	.05	.10
GenTyp			—	-.03	.04	-.07
VocEff				—	.72**	.18*
Par					—	.11
Artistic						
Int	—	.18*	-.10	.29**	.06	-.14
Gender		—	.24**	.10	.14	.11
GenTyp			—	-.01	-.04	-.03
VocEff				—	.65**	.19*
Par					—	.12
Social						
Int	—	.29**	-.24**	.23**	.08	-.23**
Gender		—	-.01	.28**	.24**	.10
GenTyp			—	-.06	-.08	.18*
VocEff				—	.66**	.24**
Par					—	.08
Enterprising						
Int	—	.05	-.18*	.15	.05	-.35***
Gender		—	.13	.06	.15*	.10
GenTyp			—	-.12	.01	.15
VocEff				—	.70**	.16
Par					—	.07
Conventional						
Int	—	.08	-.08	.19*	.05	-.22*
Gender		—	.03	.04	.15*	.10
GenTyp			—	.04	.02	.04
VocEff				—	.73**	.23**
Par					—	.11

Note. Int = Interests; GenTyp = Gender-Typing; VocEff = Career Self-Efficacy; Par = Perceived Parental Support; CPEE = Career Planning and Exploration Efficacy. Correlations are Pearson product-moment coefficients. *df* = 138.

p* < .05. *p* < .01. ****p* < .001.

istic interests, 30% of the total variance in Investigative interests, and 23% of the total variance in Social interests. Three variables significantly predicted interests in Artistic occupations: gender, career self-efficacy, and career planning/exploration efficacy, which accounted for 18% of the total variance in Artistic interests. Only two variables significantly predicted interests in Enterprising and Conventional occupations. For enterprising interests, career self-efficacy, and career planning/exploration efficacy accounted for 19% of the total variance. For conventional interests, career self-efficacy, and career planning/exploration efficacy accounted for 12% of the total variance.

Post hoc analyses using paired-samples *t* tests with alpha set to .05/(*c*) (number of comparisons) to control for Type II experiment-wise error

TABLE 3

Results of Regression Analyses Showing the Amount of Unique Variance in Interests and Career Self-Efficacy Across Holland Theme Occupational Categories

Variable	<i>R</i>	<i>R</i> ²	β	<i>F</i>	<i>t</i>
Realistic interests	.50	.25		10.96***	
Gender			-.22		-2.86**
Gender-Typing			-.22		-2.86**
Career Self-Efficacy			.27		3.52**
Career Planning and Exploration Efficacy			-.28		3.59***
Investigative interests	.54	.30		14.21***	
Gender			-.20		-2.72**
Gender-Typing			-.18		-2.49*
Career Self-Efficacy			.38		5.16***
Career Planning and Exploration Efficacy			-.30		-4.08***
Artistic interests	.41	.17		6.99***	
Gender			.21		2.58*
Gender-Typing			-.15		-1.86
Career Self-Efficacy			.31		3.81***
Career Planning and Exploration Efficacy			-.22		-2.78**
Social interests	.48	.23		9.98***	
Gender			.25		3.23**
Gender-Typing			-.18		-2.36*
Career Self-Efficacy			.21		2.61*
Career Planning and Exploration Efficacy			-.27		-3.44**
Enterprising interests	.43	.19		9.98***	
Gender			.09		1.19
Gender-Typing			-.11		-1.39
Career Self-Efficacy			.19		2.38*
Career Planning and Exploration Efficacy			-.37		-4.67***
Conventional interests	.35	.12		4.71**	
Gender			.10		1.20
Gender-Typing			-.08		-1.03
Career Self-Efficacy			.25		3.01**
Career Planning and Exploration Efficacy			-.28		-3.38**
Realistic efficacy	.59	.35		74.94***	
Parental Support			.59		8.66***
Investigative efficacy	.66	.43		104.18***	
Parental Support			.66		10.21***
Artistic efficacy	.54	.29		55.90***	
Parental Support			.54		7.48***
Social efficacy	.55	.31		60.98***	
Parental Support			.55		7.81***
Enterprising efficacy	.60	.36		76.45***	
Parental Support			.60		8.74***
Conventional efficacy	.64	.41		95.65***	
Parental Support			.64		9.78***

Note. *df* for Interest equations = (4, 134); *df* for Career Self-Efficacy equations = (1, 138); *n* = 79 boys, *n* = 61 girls.

p* < .05. *p* < .01. ****p* < .001.

(Ferguson & Takane, 1989) indicated that participants gender-typed Realistic and Investigative careers as employing significantly more men than Artistic ($t = -2.37, p < .001$; $t = -10.39, p < .001$), Social ($t = -19.34, p < .001$; $t = -16.93, p < .001$), Enterprising ($t = -12.83, p < .001$; $t = -9.65, p < .001$), or Conventional careers ($t = -15.17, p < .001$; $t = -12.26, p < .001$). Participants gender-typed Artistic and Enterprising careers as employing approximately the same number of men and women ($t = -1.56, p < .123$). In addition, participants gender-typed Social and Conventional careers as employing significantly more women than Realistic ($t = 19.34, p < .001$; $t = 15.17, p < .001$), Investigative ($t = 16.93, p < .001$; $t = 12.26, p < .001$), and Artistic careers ($t = 8.15, p < .001$; $t = 3.87, p < .001$), and gender-typed Social careers as employing significantly more women than Enterprising careers ($t = 6.29, p < .001$). Means and standard deviations for the gender-typing variables are found in Table 1.

Post hoc analyses using independent samples t tests with alpha set to .05/ (c) (number of comparisons) to control for Type II experiment-wise error (Ferguson & Takane, 1989) also indicated that boys had greater interests than girls in Realistic ($t = 3.24, p < .003$) and Investigative careers ($t = 3.71, p < .001$). Girls had greater interests than boys in Artistic ($F = 4.73, p < .032$) and Social careers ($F = 13.22, p < .001$). Means and standard deviations for the interest variables are also found in Table 1.

Hypothesis 2 stated that perceived parent support would significantly and differentially predict adolescents' career self-efficacy across Holland (Holland et al., 1969) themes. To test this prediction, six linear regressions were run with the efficacy level for occupations in each Holland theme category as the dependent variables and perceived parent support for occupations in that Holland theme category as the independent variables. Table 1 reports the means and standard deviations for each variable used in these analyses. Table 2 reports the correlation matrix of the variables used in these equations.

Hypothesis 2 was supported. As reported in Table 3, perceived parent support significantly and differentially predicted adolescents' career self-efficacy across Holland (Holland et al., 1969) themes. Parent support for pursuing Holland theme occupations accounted for the following unique variance in career self-efficacy for each category: Investigative, 43%; Conventional, 41%; Enterprising, 36%; Realistic, 35%; Social, 31%; and Artistic, 29%.

Hypothesis 3 stated that perceived parent support would directly predict middle school adolescents' career interests across Holland themes. To test this hypothesis, multiple regressions were conducted; the independent variables were perceived parent support for each of the Holland (Holland et al., 1969) theme career categories, and the dependent variables were interests in careers in each of the Holland themes. Hypothesis 3 was not supported. Perceived parent support did not directly predict young adolescents' career interests in any of the Holland theme categories (Realistic $t = -.8, p > .05$; Investigative $t = -1.92, p > .05$; Artistic $t = -1.08, p > .05$; Social $t = -1.66, p > .05$; Enterprising $t = -1.17, p > .05$; Conventional $t = -.97, p > .05$). Table 2 reports the correlation matrix of the variables used in these equations.

Discussion

This study examined the relationships among perceived parent support, career self-efficacy, career planning/exploration efficacy, gender and career gender-typing, and the career interests of middle school adolescents. Con-

sistent with SCCT, results indicate that career self-efficacy, career planning/exploration efficacy, and perceived parent support interactively predicted young adolescents' career interests for all Holland (Holland et al., 1969) type careers. Specifically, our findings indicate that career self-efficacy, and career planning/exploration efficacy directly and differentially predicted middle school adolescents' career interests across Holland themes. The distal factor of perceived parent support was not directly associated with young adolescents' career interests but did directly predict their career self-efficacy. The proximal factors of gender and career gender-typing directly predicted middle school adolescents' interests in Realistic, Investigative, and Social careers but not in Artistic, Enterprising, or Conventional careers.

Moreover, our results indicate that the set of predictor variables under study accounted for somewhat smaller proportions of the variance in Artistic interests (17%), Enterprising interests (19%), and Conventional interests (12%), than in Realistic (25%), Investigative (30%), and Social (23%) interests, although perceived parent support accounted for substantial proportions of the variance in career self-efficacy for all Holland type careers (Realistic, 36%; Investigative, 43%; Artistic, 29%; Social, 36%; Enterprising, 36%; Conventional, 41%). For Realistic, Investigative, and Social careers, post hoc analyses revealed that gender and gender-typing differences were accounted for by participants' perceptions that more men were employed in Realistic and Investigative careers, with boys having greater interests in these careers; furthermore, participants perceived that more women were employed in Social careers, with girls having greater interests in these careers. These analyses confirm the results of previous studies (Bores-Rangel et al., 1990; Church et al., 1992; Lapan, Shaughnessy, & Boggs, 1996) and suggest that young people do perceive differential gender-based access to the preparation for and pursuit of careers in fields such as engineering, the sciences, technical occupations, teaching, or counseling.

Taken together, our findings indicate that the variance in Artistic, Enterprising, and Conventional career interests may be better accounted for by other proximal or distal supports than were included in this study (e.g., proximal factors such as values, abilities, or performance might account for more of the variance). Approximately one fourth of the variance in Realistic, Investigative, and Social careers interests, however, was accounted for by variables other than abilities and performance, suggesting that a variety of career counseling interventions may be helpful to extend the range of occupations young adolescents are considering when making initial education and occupation choices.

Next, our results indicate that career planning/exploration efficacy and career self-efficacy were both significantly associated with middle school adolescents' career interests across Holland themes. This finding extends previous career self-efficacy research, which has focused on the confidence to perform career specific tasks (Betz & Schifano, 2000; Lapan et al., 1999), and highlights the importance of career planning and exploration in young adolescents' career development. The confidence to explore self in relation to the occupational world (Blustein, 1997), the confidence to find career-specific occupational information, and the confidence to engage in intentional, self-directed educational and vocational planning (Lapan, Kardash, & Turner, 2002) can facilitate adolescents' vocational aspirations for careers that they may have perceived to be inaccessible.

Finally, our results suggest that the strong associations between young adolescents' perceptions of parental support for pursuing particular types of careers and the confidence young adolescents have for performing tasks related to those careers may stand in contrast to older adolescents' dependence on other environmental career supports, such as peer support (McWhirter et al., 1998). It is particularly noteworthy that for younger adolescents, parent support accounted for as much as approximately one third to almost one half of their children's career-task related confidence. Therefore, we suggest that early adolescence may be a critical time for parental involvement in the career development of their children.

Suggestions for Practitioners

On the basis of our findings, we suggest that professional school counselors can use the SCCT framework to guide their school counseling interventions, using a two-pronged approach. First, professional school counselors can provide to middle school students counseling interventions that are designed to reduce the effects of career gender-typing and increase career planning/exploration efficacy across a variety of careers. Second, they can train and assist parents in providing opportunities to increase their adolescents' task-performance-focused career self-efficacy.

In working directly with students, we recommend several interventions that can reduce the effects of career gender-typing. One intervention is to use the interpretative report that is produced after individual administration of the MVC computer program. This report gives professional school counselors and middle school students a description of how young adolescents' confidence in particular occupations are affected by their perceptions of career gender-typing, and it allows the counselor to ask questions such as, "Is there any career that you think would be fun that is a boy's (girl's) career?" Another intervention that could help middle school students challenge their gender-stereotyping of occupations is to use video clips and informational interviews with adults who are engaged in nontraditional careers or interviews with older adolescents who are preparing for nontraditional careers.

To help increase middle school adolescents' career planning/exploration efficacy, we suggest that professional school counselors assist their students in learning career planning and exploration skills. For example, young people can engage in self-exploration skills through taking, and having interpreted to them, career assessment instruments that are designed specifically for middle school students. The MCGS, for example, can help students assess their strengths in the area of career planning/exploration, as well as those career planning/exploration skills they still want to develop. The Unisex ACT Interest Inventory-Revised (American College Testing, 1995) can aid discussions that link adolescents' enjoyment of current activities, such as exploring a science museum or drawing cartoons, to later occupational possibilities. Web sites such as the Bureau of Labor Statistics (2001) Web site "BLS Career Information: Jobs for Kids Who Like . . ." provide career information that is suitable for sixth-, seventh-, and eighth-grade learners, as well as affording them the opportunity to discover what types of occupational information will be important for them to explore throughout their careers.

To assist parents in increasing their adolescents' career self-efficacy, we recommend that they be given the opportunity to understand more thoroughly the types of careers that will be available for their children. To do this, professional

school counselors should provide parents with career information about specific occupations. This career information can be presented in various ways, including weekly columns in the school bulletin, information about highlighted careers on school listserves, and family nights at the school career center. We also recommend that professional school counselors hold parent training seminars to teach parents career-related communication skills, such as how to listen to their adolescents' career concerns, how to provide adolescents with verbal feedback about career choices, and how to provide adolescents with individual instruction in work-related skills and values (Paa & McWhirter, 2000; Young & Friesen, 1992).

Limitations of the Study

This study did not assess the effectiveness of school-based comprehensive guidance programs in increasing career-related efficacy. The study, instead, relied on previous statewide research that found that participation in such guidance programs significantly increased efficacy in targeted competency areas. This study also did not measure the magnitude of career self-efficacy or perceived parent support in the current sample of middle school adolescents.

Suggestions for Future Research

We suggest that subsequent research should focus on the interaction of different types of parent support with middle school adolescents' confidence to pursue certain career paths or to engage in certain types of career-choice behavior. Future research should also focus on discovering the most effective ways for parents to support young women's interests and preparation for mathematics, science, and technology careers, and young men's interests in careers such as teaching and counseling. We also suggest that research focus on ways that other proximal factors, such as race/ethnicity, and health/disability status influence career interests, and on ways that other background distal factors, such as teacher support or specialized technology, interact with and influence career efficacy. Finally, we suggest that outcome studies be conducted on the most effective ways that career exploration for specific careers can increase early career interests and aid in the career choice process among young adolescents.

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